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ABSTRACT

The purpose of this study was to compare the phonics skills mastered by three groups of fifth and sixth grade students. Sixty fifth and sixth grade students from an open area school were selected as subjects--14 students were reading at third grade instructional level, 15 students at fourth grade instructional level, and 31 students at fifth grade instructional level. In order to compare the groups, three hypotheses were established: there will be differences in the three groups' mastery of the six phonics skills studied; there will be differences in the phonics skills mastered by the fifth grade students reading below grade level and the fifth grade students reading at fifth grade level; and there will be differences in the phonics skills mastered by the sixth grade students reading below fifth grade level and the sixth grade students reading at fifth grade level. Some of the results indicated that phonics skills mastery varies between fifth and sixth grade students who are reading at fifth grade level and those students reading below fifth grade level. Students reading below fifth grade level had mastered consonant sounds, consonant blends, and letter sounds. Students reading at grade level could profit from instruction in blending syllables into words. (WR)

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A COMPARISON STUDY OF PHONICS SKILLS DEVELOPED BY FIFTH AND SIXTH GRADE REMEDIAL AND CORRECTIVE READERS

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CHAPTER I

INTRODUCTION

Statement of the Problem: In working with students of the intermediate grades, the teacher often has little to help him in assessing the various reading skills. Often the only measurement available to the teacher is a standardized reading test which usually gives only a word meaning and a paragraph meaning score. Thus the teacher knows that the child is weak in reading, but has little knowledge of which aspects of reading each child is weak in. Especially lacking in these tests is any testing of phonics and word attack skills. By listening to the child stumble in reading, the teacher can guess that the child is weak in some phonics skills, but the teacher still doesn't know which skills are lacking, and how serious are the weaknesses. Possibly, phonics skills may not even be the problem. Perhaps by grade five all children have mastered the basic phonics skills equally well and some other perceptual problem affects the oral reading. The problem is that this is not known. Thus the teacher needs several questions answered before developing a successful reading program for corrective and remedial readers. Do fifth grade students and older students have the same phonics skills whether they are reading at grade level or below grade level? Have these students mastered all phonics skills equally well? If they have not, which skills are

the students weak in and which skills are they successful in?

Purpose of the Study: The purpose of this study was to compare the phonics skills mastered by three groups of fifth and sixth grade students, one group reading at third grade level, one group reading at fourth grade level, and one group reading at fifth grade level. The skills to be studied were recognition of isolated consonant sounds, recognition of long and short vowel sounds, recognition of common blends and digraphs, recognition of common syllables, the blending of syllables into nonsense words, and recognition of letter sounds. In addition to the overall group comparisions, fifth grade students reading below fifth grade level were compared to fifth grade students reading at grade level. Similarly, sixth grade students reading below fifth grade level were compared to sixth grade students reading at the fifth grade level. It was hoped to determine which skills all students had mastered. The researcher was also concerned with which skills, if any, these students were weak in and whether all groups were weak in the same skills.

Statement of the Hypotheses: In order to answer the questions proposed by the problem the researcher set up the following hypotheses.

1. There will be differences in the three groups' mastery of the six phonics skills studied.

2. There will be differences in the phonics skills mastered by the fifth grade students reading below grade level and the fifth grade students reading at fifth grade level.

3. There will be differences in the phonics skills mastered by the sixth grade students reading below fifth grade level and the sixth grade students reading at fifth grade level.

Assumptions Underlying Hypotheses: In formulating the hypotheses, the researcher made three basic assumptions.

1. The students were placed in the reading groups which most closely matched their reading ability. The researcher discussed the basis for placement in the reading groups with the teachers involved. It was discovered that the teachers had used both formal and informal testing and teacher's observations in order to place each fifth and sixth grade student in the correct reading group. It should also be noted that if children were misplaced initially, they were transferred to the correct reading group.

2. The students were all tested in a similar manner following the directions prescribed by Spache. The researcher did all testing and care was taken that all directions were given in a similar manner. Testing took place in the same time period over a period of seven consecutive school days. The test was of such a nature that it was not possible for the students to gain answers through a discussion with other students.

3. The phonics skills being studied could be measured by the use of a standardized test. The test selected was Diagnostic Reading Scales: Grades 1-8 by George D. Spache. The section in this test which was used was "Supplementary Phonics Tests." Buros in the evaluation of this test pointed out that it

offers a systematic approach to the diagnosis of reading skills for the elementary grades and also for retarded high school readers. (Buros: 1972)

Definitions of terms: In order for the reader to understand the researcher's meaning the following terms have been defined:

1. A remedial reader is a student that is reading at least two grade levels below his correct grade level.

2. A corrective reader is a student who is reading one grade level below his correct reading level.

3. Instructional level refers to the level of the materials the students are working in at the present time with teacher assistance.

4. Phonics skills in the research includes only those skills tested in Spache's Diagnostic Reading Scales, "Supplementary Phonics Tests" They are Consonant Sounds, Vowels, Consonant Blends, Common Syllables, Blending and Letter Sounds.

5. Phoneme refers to the sound made by one letter or combination of letters.

6. Grapheme refers to the printed symbol for a particular sound.

7. Phonics is a study of the sound-symbol patterns found in our language.

8. Formal testing includes all tests given to all students in the fifth and sixth grade in a similar manner during the same time period.

9. Informal testing includes tests chosen by a particular

teacher to better assess the abilities of his own group. One example of this would be oral reading by his students.

10. The level of significance always refers to .05 as established by the researcher in Chapter III.

Limitations of the study: Several limitations should be noted in reading this study.

1. This study only included fifth and sixth grade students who were combined into homogeneous groups. No attempt has been made to generalize beyond this range.

2. This study limited its comparison of fifth and sixth grade students to only those students reading in the three lowest homogeneous reading groups at School X. No attempt was made to study those students in the remaining four groups because they were reading at or above grade level.

3. Since this study involved only School X, no attempt has been made to generalize the findings beyond this population.

4. The phonics skills studied were limited by the fact that only those phonics skills which Spache included "Supplementary Phonics Tests" were used. No attempts were made to modify the testing instrument.

5. This study does not include any portion concerned with the children's knowledge of phonics generalizations. It remains for another study to assess their importance in the reading process.

CHAPTER II

REVIEW OF RELATED LITERATURE

Phonics and Reading Achievement: Phonics has for some time been in the unique position of being one of the most controversial topics in the area of reading. Ramer, in a study concerned with representing and analyzing the historical data concerning phonics instruction from 1930-1964, discovered an unusual trend in the opinions of the articles available to him through the University of California periodical section. From 1930-1939, 20 articles were described with the majority stating that phonics was an important part of the reading program. In 23 articles from 1940-1949, again those in favor of phonics instruction were in the majority. In 1950-1959, of the 69 articles written, only slightly over half placed phonics as an important part of the reading program. In the last 5 years, 1960-1964, slightly less than a majority of the 41 articles sited felt phonics was an important part. Ramer pointed out that as views of articles stating phonics was an important part of the program decreased, there was an increase in the number of articles recommending phonics as a tool in the early teaching of reading. The opinions of the articles leaned toward instruction which provided using several word recognition skills as a means of identifying unknown words. (Ramer: 1971)

Smith, in another discussion of the changes in phonics viewpoints, pointed out that Witty and Sizemore, in 1955,

in Elementary English reported that phonics instruction was debatable and that the amount available in basal readers gave enough instruction for children. Smith stated that Jeanne Chall's book, Learning to Read: The Great Debate (1967), brought about the viewpoint that first grade decoding emphasis produced better readers. Smith pointed out that, as a source for her data, Chall used the 1966 USOE first grade reading studies. Smith stated that code emphasis was found superior in the 27 projects in first grade and this was also true in the studies carried on into second grade. However, with the six investigators who carried the project through the third grade level, five of the six methods showed no superiority to any other method. The sixth method was the phono/linguistic method which had the confounding variable of the highest retention rate of students. Smith did point out three quotes from the USOE studies conclusions which she felt were important.

> "Word study skills must be emphasized and taught systematically regardless of what approach to initial reading instruction is utilized.
>
> "Combinations of programs, such as a basal program with supplemental phonics materials, often are superior to single approaches.
>
> "A writing component is likely to be an effective addition in a beginning program." (Smith: 1970)

Many studies have been concerned with which reading approach is best to use. Bordeaux reports on a study of three reading approaches--Basal reader, Basal reader and phonics, Basal reader, phonics and sensory experiences--utilized in 28 classes of first grade students for 140 days (one school

year). The results were that no approach was consistently superior. Certain subtests indicated basal, phonics, sensory method was superior but not in all instances. (Bordeaux: 1966)

Hayes performed a longitudinal study again searching for the best approach in beginning reading. This study involved the public schools of New Castle, Pennsylvania from 1964 to 1967. Its purpose was to determine which of four approaches (basal reading program by Scott, Foresman and Co., 1962; phonics program by J. B. Lippincott Co., 1963; a combined program using Scott, Foresman and the phonics booklets Phonics and Word Power by American Education Publishers, Inc., 1964; a language arts approach using i/t/a materials from i/t/a Publication, Inc., 1963, with transition made into Treasury of Literature Series by Charles E. Merrill Books, Inc., 1960) was the most successful. Among the various techniques used to measure the dependent variable, student achievement, were standardized silent reading tests, reading attitude inventories and lists of the number of books read by each student. In addition, randomly selected samples of students were given individualized oral reading tests. Teachers were instructed, advised and observed in each approach. From the results of the study Hayes concluded that methods and materials can make the difference in the teaching of reading. In general, the Lippincott series and i/t/a--Merrill series made the best progress as measured by the instruments used in this study. He did not suggest that one series was better than any other. He also pointed out that this study was made under ideal

conditions. Other researchers may not observe the same results. (Hayes: 1968)

Another study evaluating the reading program of grades 1-3 was performed by the Pasadena City Unified School District. Its purpose was to evaluate the effectiveness of a three year experimental reading program using the phono-visual method of reading instruction. Students were matched regarding sex, chronological age, and I. Q. The results showed that the phono-visual approach was an effective method in teaching reading and spelling in the primary grades. In each case the experimental group was superior to the control group. Correlation analysis showed that first grade boys and girls taught by the phono-visual method had greater success in achieving their learning potential than did the control group. The phono-visual method also seemed to be a valuable asset in the reduction of the number of children needing remedial reading instruction. (Pasadena City Unified School District: 1965)

A study involving both primary and intermediate grades was performed by Ibeling.. His purpose was to measure the effects of supplementary phonics workbooks on reading achievement and spelling in students of the second, fourth, and sixth grades of the public schools in Wayzata, Minnesota. The study lasted six months. The children were initially assigned randomly to classes and then the classes were randomly assigned to control and experimental groups. The use of the workbooks in second grade increased visual analysis skills, phonetic knowledge and spelling ability, but it did

not increase the reading level. In the fourth and sixth grades the use of workbooks did not produce any significant increases. Ibeling concluded that phonics workbooks added little to the program when teachers use the workbooks and teacher's guides of a good basal series. (Ibeling: 1959)

Phonetic Elements: In addition to research concerning phonics and student achievement, research has also been completed concerning different methods of teaching various phonetic elements. Wylie tested 300 first grade students in 14 classrooms over a one year period in two metropolitan areas concerning the relationship of letter name knowledge and reading success, letter name knowledge and phonic learning, and the efficiency of vowel identification ability in various situations. Testing took place in September and June. Ten days were spent teaching letter names, upper and lower case, to first grade classes. Wylie's conclusion was that letter names can be learned easily in 10 days. In letter name knowledge and reading achievement, those children who received early letter name training were reading three months higher than those who had late letter name training in word meaning and five months higher in paragraph meaning. The statistical significance was at .01 level. Wylie's conclusion was that the sooner the child learns the letter names the greater the achievement. As a result of testing 100 children on phonics sounds in November, it was discovered that the children knew 40% of the sounds if the letter names were known and 36% of the sounds if the letter names were not known. Wylie's conclusion was that letter name knowledge apparently carries

over to letter sounds. In his study of vowel sounds Wylie discovered it is 1.7 times more difficult to recognize short vowel sounds in isolation than in phonograms. Wylie stated as implications that letter names should be taught as soon as possible. Phoneme identification should be included and be taught in beginning, middle and final positions in words. Short vowel sounds might best be introduced in phonograms. (Wylie: 1969)

Samuels, studying letter name-letter sound knowledge, comes up with different results than Wylie's. Samuels' purpose was to see if letter name knowledge facilitated learning of words composed of the same letters. He used 100 subjects midway through first grade. The children were randomly assigned to four treatment groups in which artificial letter forms were used in the experimental setting. Samuels concluded from the results of the four groups that letter name knowledge does not facilitate word knowledge. (Samuels: 1970)

Another study which questions the use of phonic analysis skills with first grade students was completed by Rosner with 40 children from a suburban Pittsburgh school. His purpose was to determine whether phonic analysis training could help the children to succeed on the Auditory Analysis Test (AAT), and then to relate what they had learned to actual reading performance. Sixteen children who had not begun reading in kindergarten were randomly divided into a control group and an experimental group. The experimental group received 37 sessions before taking the AAT. The lessons continued for

12 more sessions. After 70 school days the reading test was given to all 40 students. Rosner's results revealed the two groups of non-readers were no longer homogeneous. The experimental group scored higher in reading and auditory perception, which was believed to be due to training in phonics. The children who had begun reading in kindergarten were still higher than the experimental non-readers group but their phonics skills were more closely alike. Rosner's conclusion was ". . . it seems justifiable to suggest that teaching basic phonics analysis skills to those children who demonstrate inadequacy upon entering a beginning reading program is desirable, if not, indeed; essential." (Rosner, 1971)

Another aspect of phonic analysis is consonant substitution. Griffin completed a study involving 90 second graders using paired association from known to unknown words in which she tested their ability to employ initial and final consonant substitution. The results showed that there were significant relationships between the ability to recall known words and identify similar words using consonant substitution, to substitute initial and final consonants, and in reading achievement and consonant substitution. Griffin concluded that second grade children can employ single consonant substitution. Her implications were that consonant substitution should be used in reading materials and that special effort should be made to teach this skill with the low child. (Griffin: 1969)

Another aspect of phonic analysis is phoneme blending. In Balmuth's study she developed an instrument to measure phoneme blending of nonsense syllables and then investigated its relationship to silent reading achievement of 252 students randomly selected from grades 1-6. Care was taken so that there was an equal number of boys and girls and the sample was typical of the New York City's school population. Using the odd-even technique, a reliability coefficient of .88 was established for the instrument. Results of the study showed there was a positive relationship of .66 between phoneme blending and silent reading achievement for 105 boys from grades 2-6 in the study and a .56 positive relationship for the 105 girls from grades 2-6. Balmuth made the following conclusions from the study. Phoneme blending of nonsense syllables can be reliably and validly measured. There is a positive relationship between phoneme blending and silent reading achievement. Sex did not affect either phoneme blending and its relationship to silent reading achievement. Older children are better blenders than younger children. European background children performed better than children of Negro and Latin-American backgrounds. As implications for teaching, Balmuth recommends assessment of phoneme blending be made and phoneme blending practice be incorporated into the reading program at any grade level where difficulties exist. With ethnic groups it is especially important to make up any deficiency in this area. (Balmuth: 1971)

Phonics Generalizations: An area of phonics which has come under close scrutiny in recent years is the utility of phonics generalizations being used by basal readers. Clymer first brought this problem to the attention of educators in his study of the utility of 45 selected phonics generalizations used in primary grades. His criterion for selection of generalizations to study was whether the generalization was stated in such a way that it could be stated that the generalization aided or hindered in the pronunciation of a word. The generalizations and the words studied were taken from four basal series. Clymer stated as the criterion that each word list contained a minimum of 20 words and had a utility of 75%. His conclusions were that many generalizations taught were of limited value and that of the 45 generalizations studied, only 18 met the criterion established. He stated that further research needed to be completed in the area of experimental research in which a person would examine the child's ability to apply these generalizations. He also questioned whether the percentage of utility he had established was too high. (Clymer: 1963)

Emans developed a study for words beyond the primary grades using Clymer's study as a model. He selected his words by using a random sample of 10% of the words beyond the primary level in Teachers Word Book of 30,000 Words by Thorndike and Lorge. Using the same criterion as Clymer, Emans had 16 generalizations which applied. Of the 16 generalizations, 13 were found useful in both studies. Again it was pointed out the lack of research in the area of teaching

the generalizations to children. (Emans: 1967)

Bailey too studied the utility of phonics generalizations this time in grades 1-6 involving the words from eight basal texts. Using Clymer's generalizations she concluded that only six generalizations were simple to understand and applied to large numbers of words with only a few exceptions. As recommendations Bailey pointed out again the need for further research using phonics generalizations in teaching reading and the ability of the child to use these generalizations. She also pointed out the present study needs to be expanded to include children's vocabulary from other areas and interests. (Bailey: 1967)

From the point of discovering the lack of utility of many phonics generalizations, researchers became interested in how to improve on the generalizations so that they might serve a purpose in instruction. One such study was completed by Bailey in which she studied the overall utility of the vowel digraph generalization as it applied to words children met in grades 1-6. She also studied the utility of various subgroups, and then proposed a new vowel digraph generalization. Of the 1506 words studied, 490 words conformed and 1016 words were exceptions. From the study she developed the following generalization which had a utility rate of 92%: "When two vowels are side by side, usually only one vowel sound is heard." A second generalization was formulated--"When ai, ea, ei, or oa is found in a word, usually only the long sound of the first vowel is heard."--which had a utility rate of 72%.

In her conclusions she felt children should be helped by the generalization which stated one vowel sound is heard. She pointed out that oi, ou, oo, au, io, ia, and ua must be taught as exceptions. She stated that the children must see flexibility in phonics generalizations. (Bailey: 1969)

In another study, Burmeister studied the "final vowel-consonant-e" generalization in a similar manner using 2715 words. His conclusion was that by stating the vowel could have a long or a short sound the utility rates were increased for the vowel sounds. Again he pointed out the need to teach the exceptions as sight words. (Burmeister: 1971)

Summary

Various viewpoints have been expressed concerning phonics instruction in the last 40 years. The opinion of many writers seems to be that phonics skills is a necessary part of reading instruction, whether it is a separate program or incorporated into the basal series. Research concerning reading instruction approaches and overall reading achievement indicates that no one approach is superior to any others. It is important to note that phonics skills are incorporated into many of the series studied. In several studies phonics instruction aided in better achievement on specific sub-tests though perhaps not at a significant level.

There has also been concern by researchers for the best method to present various phonics principles. Letter names, consonant sounds, consonant substitution, vowel phonograms

and syllable blending research has been completed. Although there is confusion concerning the importance of learning letter names, the learning of consonant sounds, consonant substitution, vowel phonograms, and syllable blending seems to be an important task. In addition, studies have been made concerning the utility of phonics generalizations. Of the 45 generalizations studied less than half showed a high degree of utility. Researchers have offered in various cases modifications of these generalizations which increase the utility of the generalizations. Researchers are very aware of the need for experimental research concerning the child's ability to use these generalizations.

It seems justifiable to state that the development of phonics skills has a definite place in the reading program. However, the question still remains: Have remedial students developed adequate phonics skills?

CHAPTER III

RESEARCH METHODS

In order to test the hypotheses that there are differences in the phonics skills mastered by the three reading groups, the three groups were tested in a similar manner using a standardized phonics test.

Description of the Population: School X is an open area school containing 781 students in grades 1-6. Each large room, called a pod, contains four classes or two classes. The teachers are left with the option to team teach or to operate a self-contained classroom. However no walls separate the teachers who do not team-teach from other classes. This school is located in a middle to upper-middle class section of the city. All children are in walking distance of the school. Minority groups make up only 6 percent of the schools population. 3% of these students are Negro and 2% are Spanish. The remaining 1% is Indian and Oriental. 94% of the children are Caucasion.

In the fifth grade there are 114 students located in one large pod with 4 teachers. In sixth grade there are 95 students with three teachers, 2 of which are in one pod and the third teacher operates a self-contained classroom.

For the reading classes the seven fifth and sixth grade teachers teach homogeneous reading groups made up of mixed fifth and sixth grade students. The students are placed in

the appropriate group by means of formal testing, informal testing and teacher's observation. The students reading below grade level are placed in smaller reading groups, the smallest group containing only 14 students. The students reading above grade level are placed in larger reading groups, usually containing 35-40 students.

Selection of Subjects Used in Sample: In determining which students would be involved in the study, the researcher attempted to select the students in such a way so that there would be the least disruption to the classes as possible and still be able to select as large a sample as possible. Since phonics skills development seems basic to beginning reading development, all students reading below the fifth grade level were included. This involved two classes of students.

The lowest reading group, with a total of 14 students, was reading at third grade instructional level at the time of the testing. There were 9 fifth grade students and 5 sixth grade students. In standardized achievement tests given in October these students had a grade equivalent mean of 3.9 and a standard deviation of .5 in Word Meaning. In Paragraph Meaning, the grade equivalent mean was 3.8 with a standard deviation of 1.3.

The second group, including 15 students, was reading at the instructional level of fourth grade at the time of the testing. In this group were 9 fifth grade students and 6 sixth grade students. In the standardized achievement tests, this

group's grade equivalent mean on the Word Meaning test was 5.1 with a standard deviation of 1.1. In Paragraph Meaning, the grade equivalent mean was 4.5 with a standard deviation of .6.

In order to test the hypothesis that there would be differences in phonics skills development, a third group was chosen which was reading at the instructional level of fifth grade. In this group there were 31 students, 20 in fifth grade and 11 in sixth grade. These students were reading approximately at grade level. In the standardized achievement test Word Meaning portion the group's grade equivalent mean was 5.9 with a standard deviation of 1.0. In Paragraph Meaning the grade equivalent mean was 5.5 with a standard deviation of 1.1.

The remaining four groups were reading at or above grade level. These children have no serious reading problems. Therefore they were not included in the study since its purpose is to help identify possible reading weaknesses.

Thus 60 students were included in the final study. All students from the three groups selected were tested.

Selection of the Testing Device: In determining the testing device to be used to test the hypotheses, several factors were considered.

First, the researcher attempted to see whether group or individual testing would be the most beneficial. Based on the conclusions of a study completed by Ramsey concerning

testing devices and phonics skills, individual testing was chosen. Ramsey had found in a comparison of a group phonics test and two forms of individual phonics test with fifth and sixth grade students that the group test failed to pinpoint problem areas accurately. Ramsey stated that individual testing was found to be a necessity for the poor reader. (Ramsey: 1969)

Winkley in a study of diagnostic tests pointed out several important considerations in choosing a diagnostic test. She pointed out that no one diagnostic test indicates all word recognition weaknesses. Also she stated that often the test was evaluating spelling rather than reading ability. Thus she stated that teachers need to find the test which best fit their needs. (Winkley: 1971)

Keeping the above statements in mind, the researcher chose Diagnostic Reading Scales by Spache--"Supplementary Phonics Tests." The total test was evaluated by Buros as being a systematic approach to the diagnosis of reading skills at the elementary school level and at the high school level for retarded readers. In addition it stated that the phonics skills test tests skills in recognition and use of letter sounds, consonant blends, common syllables and blending sounds into words. Buros one criticism was concerning the norms established for the Supplementary Phonics Tests stating that it was not advisable to use them since Buros questioned the grade equivalents given in the norms. However, since no comparision was made to these norms in the study, this was

not a problem.

Another reason for the selection of this test was based upon the review of the literature. This researcher discovered that the "Supplementary Phonics Tests" did in fact test many of the skills which have been found through previous research to be important. Several studies pointed out the need for recognition of consonant sounds and consonant blends. (Wylie: 1969) (Rosner: 1971) (Griffin: 1969) The fact that vowel sounds contained in actual words or in phonograms are easier to recognize was pointed out by Wylie. (Wylie: 1969) Balmuth pointed out the need for syllable knowledge and blending of nonsense words. (Balmuth: 1971) Rosner pointed out that auditory perception was indeed an important skill. (Rosner: 1971) Thus "Supplementary Phonics Tests" did test each of these areas: Consonant Sounds, Vowels, Consonant Blends, Common Syllables, Blending and Letter Sounds.

A third reason for the selection of this test was that it was fairly practical for the teacher to use within the classroom. It requires approximately 5 minutes to give in its entirety. The test can be given in sections thus reducing the time needed to test each child in one particular area. The children are tested in a manner which is similar to the reading process; that is they are asked to identify letters or groups of letters typewritten.

Description of Test Components: Spache's "Supplementary Phonics Tests" consists of 6 sub-tests. Some knowledge of what is expected of the child might be beneficial to the reader.

Test One--Consonant Sounds: All 21 consonants are presented to the child. The child is asked to tell how each letter sounds. Answers which include a vowel sound after the consonant are considered correct. For example, for the consonant "b", ba or bbb would be an acceptable answer.

Test Two--Vowels: Five words are presented to the child. He is asked to first tell how the word would sound with a long vowel sound. Then he is asked to tell how the same word would sound with a short vowel sound. In this way all five vowels are tested for long and short sounds requiring only 10 responses from the child.

Test Three--Consonant Blends: Fifteen common 2-letter consonant blends have been selected by Spache for this test. The child is asked to tell how these letters sound.

Test Four--Common Syllables: In this test 33 common syllables have been selected by Spache. The child is asked to read these to the tester. A pronunciation key is included giving examples of acceptable responses.

Test Five--Blending: Ten nonsense words of 1, 2, or 3 syllables are given in this test. The child is asked to pronounce these words. Any reasonable pronunciation is considered acceptable.

Test Six--Letter Sounds: In this test the teacher makes the 21 consonant sounds and asks the child to tell what letter the sound is like.

Scores are based on individual sub-tests. No total score is computed. A score indicates the number correct.

Data Collection Method: All children were tested in a similar manner. Testing took place on seven consecutive school days during the reading period, 10:30-11:30 a.m.

Directions were given exactly as stated by Spache. In the test, Consonant Sounds, it was made certain the child distinguished the difference between sound and letter name by using an example. For the letter "y" the children often gave the long e sound. If this occurred, they were asked to give the sound if "y" was the first letter of a word. In the second test, Vowels, the example given by Spache was given to distinguish between the long and the short vowel sound. On Test Three, Consonant Blends, one clarification was necessary with some students. It was explained that "ck" was found at the end of a word. The other tests posed no problems for the students. The directions were easily understood.

Research Design and Procedures: Once the data had been collected for each child in the sample, the number correct on each test was recorded by group. For each test the mean and standard deviation or variance was calculated for the group. No overall scores were calculated as the researcher was concerned with the acquisition of skills as measured by the tests.

Using analysis of variance a F ratio was determined in the comparison of the three groups for each of the six tests. A significance level of .05 was established in order to state whether there were differences between the groups.

In addition, all fifth grade students (18) in the groups whose instructional level was third and fourth grade were

compared to all fifth grade students (20) whose instructional level was fifth grade. In a similar manner those sixth grade students (11) reading below fifth grade level instructionally were compared to sixth grade students (11) reading at fifth grade instructional level. The t test was used for these comparisons with a significance level of .05 established for determining whether differences do exist.

In addition, a mastery level of 80% was established for each group on each test. Thus, this determined whether sufficient knowledge of this skill had been learned. Each group was evaluated concerning whether it had or had not achieved the mastery level established.

CHAPTER IV

ANALYSIS OF RESULTS

The findings of this study indicate that there are differences in the phonics skills mastered by the groups studied.

Analysis Techniques: In order to compare the three groups an F test analysis of variance was completed. Table I identifies each group, gives the mean of each group and F ratio for each subtest. Tables II-VII gives the tests between the means for each test and indicates whether significant differences exist between the groups.

For the comparison of the 18 fifth grade students reading below fifth grade level to the 20 fifth grade students reading at grade level a t test was completed. Table VIII indicates the results. t-ratio and level of significance are given.

In a similar manner the sixth grade students were compared. The results are recorded in Table IX.

Hypothesis I: Hypothesis I states that "there will be differences in the three groups' mastery of the six phonics skills studied." In testing Hypothesis I the F ratio was found to be significant at the .05 level for Consonant Sound and Letter Sounds. The F ratio was found to be significant at the .01 level for Vowels, Consonant Blends, Common Syllables, and Blending. (See Table I) Group I is those students whose instructional level is third grade. Group II is those students whose instructional level is fourth grade. Group III is those students whose instructional level is fifth grade.

TABLE I: THE RESULTS OF THE COMPARISONS OF THE THREE GROUPS IN THE SIX PHONICS SKILLS TESTS

TESTS	GROUP I (Mean)	GROUP II (Mean)	GROUP III (Mean)	F RATIO
Consonant Sounds	19.64	19.93	20.71	4.67*
Vowels	5.64	5.87	9.29	15.73**
Consonant Blends	12.79	13.40	14.55	8.24**
Common Syllables	25.79	26.60	30.84	13.87**
Blending	4.86	5.93	7.97	11.30**
Letter Sounds	20.29	19.73	20.71	4.20*

* at 2/60 df 3.15 required at .05 level of significance
** at 2/60 df 4.98 required at .01 level of significance

Comparison of Tests Between Groups: Tables II-VII indicate which groups differed at a significant level. In all tests except Letter Sounds there was a significant difference between Groups I and III and Groups II and III. In this case the research hypothesis that there will be differences in the phonics skills mastered is accepted. There was no significant differences between Groups I and II. In this case the research hypothesis that there will be differences in the phonics skills learned is rejected. In Letter Sounds the only significant difference was between Groups I and III. In all cases Group III performed significantly better than Groups I and II. Thus, the children in Group III both are stronger in phonics skills and reading achievement than the other two groups. Hayes and the Pasadena City Unified School District also reported findings that phonics skills strengths seemed to

produce better overall reading achievement. (Hayes: 1968)

(Pasadena City Unified School District: 1965)

TABLE II: TEST--CONSONANT SOUNDS
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III	*	*

* indicates a significant difference

TABLE III: TEST--VOWELS
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III	*	*

* indicates a significant difference

TABLE IV: TEST--CONSONANT BLENDS
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III	*	*

* indicates a significant difference

TABLE V: TEST--COMMON SYLLABLES
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III	*	*

* indicates a significant difference

TABLE VI: TEST--BLENDING
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III	*	*

* indicates a significant difference

TABLE VII: TEST--LETTER SOUNDS
TESTS BETWEEN GROUPS

	Group I	Group II
Group II		
Group III		*

* indicates a significant difference

Hypothesis II: Hypothesis II stated that "there will be differences in the phonics skills mastered by the fifth grade students reading below grade level and the fifth grade students reading at fifth grade level." Table VIII indicates there was no significant difference between students reading below fifth grade level and at fifth grade level in Consonant Sounds and Letter Sounds tests. All other tests verified the research hypothesis that there are differences between the two groups significant to the .01 level. Fifth grade students reading at grade level scored better in those tests than fifth grade students reading below grade level. Again this seems to verify previous research concerning phonics strengths and reading achievement.

Group A in Table VIII refers to those fifth grade students reading below fifth grade level. Group B refers to those fifth grade students reading at fifth grade level.

TABLE VIII: THE RESULTS OF A COMPARISON OF TWO GROUPS OF FIFTH GRADE STUDENTS IN SIX PHONICS TESTS

TESTS	GROUP A Mean (S.D.)	GROUP B Mean (S.D.)	T RATIO
Consonant Sounds	20.17(1.26)	20.65(.57)	1.51
Vowels	6.06(3.12)	9.45(1.56)	4.19**
Consonant Blends	13.50(1.46)	14.65(.65)	3.10**
Common Syllables	26.11(4.15)	31.50(1.53)	5.27**
Blending	5.67(2.13)	8.35(1.85)	4.04**
Letter Sounds	20.33(.94)	20.70(.64)	1.38

* at 36 df 2.02 required at .05 level of significance
** at 36 df 2.70 required at .01 level of significance

Hypothesis III: Hypothesis III stated that "there will be differences in the phonics skills mastered by the sixth grade students reading below fifth grade level and the sixth grade students reading at the fifth grade level." Table IX reveals there is no significant difference in the 11 sixth grade students reading below fifth grade level and the 11 sixth grade students reading at fifth grade level in Common syllables; therefore the research hypothesis must be rejected. In all other tests the research hypothesis has been verified to at least the .05 level of significance. Thus sixth grade students reading at fifth grade level perform significantly

better in most phonics skills.

In Table IX Group C refers to those sixth grade students reading below fifth grade level. Group D. refers to those sixth grade students reading at fifth grade level.

TABLE IX: THE RESULTS OF A COMPARISON OF TWO GROUPS OF SIXTH GRADE STUDENTS IN SIX PHONICS TESTS

TESTS	GROUP C Mean (S.D.)	GROUP D Mean (S.D.)	T RATIO
Consonant Sounds	19.18(1.85)	20.82(.39)	2.73*
Vowels	5.27(2.99)	9.00(1.04)	3.72**
Consonant Blends	12.45(2.31)	14.36(.77)	2.48*
Common Syllables	26.36(3.82)	29.64(3.47)	2.00
Blending	5.00(2.56)	7.27(1.96)	2.23*
Letter Sounds	19.45(1.67)	20.73(.86)	2.14*

* at 20 df 2.09 required at .05 level of significance
** at 20 df 2.85 required at .01 level of significance

Other Findings--Mastery of Phonics Skills: Level of mastery of phonics skills was set at 80 percent correct.

In Consonant Sounds 16.8 group mean score must be achieved in order to have satisfied the criterion. All subgroups satisfied the criterion. Since all groups have mastered this skill, this finding verifies the previous research of Wylie that consonant identification is an important skill in the beginning reading process. (Wylie: 1969)

In Vowels, criterion mean score must be 8. In Table I it is shown that only Group 3 satisfied the criterion. In

Tables VIII and IX it is noted that in each case only those students reading at fifth grade level satisfied the criterion. This finding adds information to Wylie's conclusion that vowels are easiest to recognize in phonograms. This was the form of Spache's identification. (Wylie: 1969)

In Consonant Blends a group mean of 12.0 was necessary to satisfy the criterion. All subgroups satisfied the criterion. Griffin had shown concern for the low child being able to employ consonant substitution of letters and blends. (Griffin: 1969) This finding points out that by fifth grade children reading below grade level have mastered some basic knowledge of blends.

In Common Syllables a group mean of 26.4 was necessary to satisfy the criterion. In Table I, Groups II and III satisfied the criterion. Group I did not. In Tables VIII and IX all subgroups satisfied the criterion.

In Blending a group mean of 8.0 was necessary to satisfy the criterion. In Table I no groups satisfied the criterion. In Table VIII the fifth grade students reading at grade level satisfied the criterion. In Table IX neither group of sixth grade students satisfied the criterion. This finding that weaknesses exist in all reading groups for blending of syllables verifies Balmuth's conclusions and recommendations that blending is an important skill and should be incorporated at any grade level where difficulties exist. (Balmuth: 1971)

For the test of Letter Sounds a group mean of 16.8 was

necessary. In all comparison, all subgroups satisfied the criterion. This verifies Rosner's study of auditory perception as a basic readiness skill. (Rosner: 1971)

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary: The problem which initiated the need for this research was that at the present time the teachers have few techniques for assessing areas of difficulties in reading other than the standardized group achievement tests in the intermediate grades. Especially lacking is a means to assess phonics skills of remedial and corrective readers on the fifth and sixth grade level. Thus, the teacher has no clue to the weaknesses and strengths of her class in phonics skills.

The purpose of this study was to compare the phonics skills mastered by three groups of fifth and sixth grade students--one group instructional at third grade level, one group instructional at fourth grade level and one group instructional at fifth grade level. Subgroups were formed by grade level comparing students reading at fifth grade level with students reading below fifth grade level.

In order to compare the groups, three hypotheses were established.

1. There will be differences in the three groups' mastery of the six phonics skills studied.

2. There will be differences in the phonics skills mastered by the fifth grade students reading below grade level and the fifth grade students reading at fifth grade level.

3. There will be differences in the phonics skills mas-

tered by the sixth grade students reading below fifth grade level and the sixth grade students reading at fifth grade level.

Sixty fifth and sixth grade students from an open area school were involved in the study--14 students instructional level third grade, 15 students instructional level fourth grade, and 31 students instructional level fifth grade. All students were tested using the "Supplementary Phonics Tests" of the Diagnostic Reading Scales by George Spache. Six tests were included--Consonant Sounds, Vowels, Consonant Blends, Common Syllables, Blending, and Letter Sounds. Means were calculated for each group and an analysis of variance was completed indicating whether there were significant differences between the three groups. A level of significance of .05 was established.

To test Hypothesis II, 18 fifth grade students reading below fifth grade level were compared with 20 fifth grade students reading at fifth grade level. To test Hypothesis III, 11 sixth grade students reading below fifth grade level were compared to 11 students reading at fifth grade level. A t test was used to determine whether the differences were found to be significant. In all cases a level of significance was established at .05.

In addition, a group mean of 80% was required to state that the group had mastered the skill being tested.

The findings pointed out that the F ratio was at .05 level of significance in all cases. However, there were no significant differences between the means of Group I (reading

instructional level third grade) and Group II (reading instructional level fourth grade). Except for Letter Sounds, all tests showed a significant difference existed between Groups I and III and Groups II and III. In each case Group III performed significantly better than either Group I or Group II. In Letter Sounds there was a significant difference between Groups II and III only, with Group III performing better.

In the comparison involving 18 fifth grade students reading below fifth grade level and 20 fifth grade students at fifth grade level there was no significant differences on the test of Consonant Sounds and Letter Sounds. In the other four tests the differences were significant at the .01 level of significance. In these tests students reading at grade level performed significantly better than the students reading below grade level.

In the comparison of the 11 sixth grade students reading below grade level to the 11 sixth grade students reading at fifth grade level, the differences in Common Syllables were not significant. In all other cases the differences were significant to at least the .05 level of significance. Again the sixth grade students reading at fifth grade level performed significantly better than the students reading below fifth grade level.

In setting up a mastery level of 80% the researcher discovered that Group III satisfied the criterion in all cases except the for Blending. Group II satisfied the criterion in Consonant Sounds, Consonant Blends, Common Syllables and

Letter Sounds. It did not satisfy the criterion in Vowels and Blending.

Group I satisfied the criterion in Consonant Sounds, Consonant Blends and Letter Sounds. It did not satisfy the criterion for tests, Vowels, Common Syllables and Blending.

Conclusions: As a result of the testing of the three hypotheses the following conclusions have been made.

1. Phonics skills mastery varies between fifth and sixth grade students who are reading at fifth grade level and those students reading below fifth grade level. There seems to be little difference between corrective and remedial groups in this study. Fifth and sixth grade students in all three groups experienced difficulties in at least one area. Therefore phonics skills need to be taught at this grade level to those students who display weaknesses.

2. Fifth and Sixth grade students in this study reading below fifth grade level have mastered consonant sounds, consonant blends and letter sounds. Review could possibly be needed but intensive instruction is not necessary. They experience difficulty working with long and short vowels, and blending syllables into words. They could profit from instruction in common syllables. Thus a program of instruction should include these areas.

3. Students reading at grade level could profit from instruction in blending syllables into words as their performance was just below mastery level. A review of other skills should be included if needed.

4. There does seem to be some relationship between phonics skills and reading achievement. A correlation study needs to be completed to assess the strength of this relationship.

5. This testing device seemed to adequately pinpoint specific weaknesses in the phonics skills development.

Recommendations: As a result of this study, several recommendations can be made concerning the use of this material.

1. By assessing the levels of phonics skills development with remedial and corrective students, a program should be developed to facilitate the improvement of these skills.

2. The teacher can examine each child's personal record of the test to assess any specific weaknesses this child may have.

3. To aid the teachers in developing a phonics and word attack skills program which would best benefit their students, the researcher discovered several models which might bear further investigation. Campbell offered two sets of guidelines to aid the elementary teacher. The guideline for third and fourth grade offered skill activities for phonetic analysis, comprehension and oral reading. A teacher's guide and enrichment folder are included. (Campbell: 1965--ED 013 196) Campbell also organized a similar teacher's guide for grades five and six which indicates which skills need to be developed and which skills need to be reviewed. (Campbell: 1965--ED 013 194)

Mason also listed various procedures for teaching word analysis skills. Topics which she included were sight words, phonics instruction, structural analysis, synonyms, antonyms and homonyms. She also discusses comprehension and interpretation skills. (Mason: 1968)

Another program which may aid the teacher to better develop a comprehensive phonics program is the course description of a high school course in Dade County Public Schools in Miami, Florida. The course was designed to improve the decoding skills of reading students who were weak in this area. The course offered this description of its purpose: "Its purpose, based on pre-diagnostic data is to individually assist students in the mastery of individual learner's difficulties in the areas of phonetic analysis, structural analysis, contextual analysis, dictionary use and other skills contributive to the mechanics of reading efficiency." (Campbell: 1971)

Suggestions for Further Research: This researcher recognized as a major limitation of this study that it involved only firth and sixth grade students of School X. Research needs to be completed with fifth and sixth grade remedial and corrective students in other schools in order to determine whether the findings of this study are unique to just one situation. In addition, research needs to be completed with older remedial and corrective students to see if students in grades above the sixth grade still have problems in basic phonics skills.

In grades three and four, research might be completed

with all students to see if even good readers have mastered the basic phonics skills.

Another area of research which needs to be completed involves determining if there is a positive correlation between phonics skills mastery and reading achievement. There seems to be some relationship but the strength of this relationship needs to be measured.

Since the ability of a child to use phonics generalizations was not studied, this area definitely needs to be explored before experimental research can be designed.

In the area of experimental research several possibilities for further research exists. One design would be to compare two matched groups in reading ability--a control group involving reading instruction as presently given and an experimental group in which to the present reading instruction is added a systematic program for the development of the basic phonics skills. At the end of the experiment a comparison of the reading skills strengths and weaknesses could be completed to determine if phonics skills did assist in overall reading improvement.

Another area involves research and phonics generalizations. It needs to be determined through experimental research if training in specific phonics generalizations aids in reading achievement.

A third area of experimental research involves developing the best reading program to fit the needs of the students. Experimental research needs to be completed to determine which

skills are best learned by a specific approach.

Thus, there are many questions still left unanswered by this study. It is hoped it offers a basis for further research.

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